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IN THE

SUPREME COURT

OF THE

UNITED STATES

CHARLOTTE SPADARO, Petitioner,

v.

CITY OF RIALTO, CALIFORNIA, Respondent.

On Petition for a Writ of Certiorari

to the Supreme Court of California

MOTION FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* AND BRIEF OF *AMICUS CURIAE* BY AMERICAN DOG OWNERS ASSOCIATION

IN SUPPORT OF PETITIONER

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MOTION FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE*

Pursuant to Rule 37.2 (b) of this Court, Movant requests leave to file the accompanying brief of amicus curiae, in support of the Petition for writ of certiorari. All parties were timely notified of the intent to file this brief, under Rule 37.2 (a). Petitioner consented. Respondent withheld consent.

Our group, the American Dog Owners Association, represents dog owners nationwide.

This case is of significant interest to all pet owners in America, and we submit that our standing and expertise is of value in this case.

.

Respectfully submitted,

Maureen Hauch, Executive Director,
Dawn Capp, Esquire, Board Member,
American Dog Owners Association

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Interest of *Amicus Curiae*

We submit this *amicus curiae* brief in favor of this Court granting review for Petitioner.[1]

Our group, the American Dog Owner's Association, represents and supports the rights of dog owners nationwide.

We submit that a full adjudicative hearing must not be replaced by a mere probable cause hearing upon the deprivation of someone's pet.

This case presents an issue that is of great importance to all pet owners. The threat to our nation's pet owners is real, and of great concern.

Reasons for Granting the Petition

a. Conflicting State Decisions

Petitioner appeals a California Court decision which conflicts with the decision of the Ohio Supreme Court on the federal issue of due process, relating to the keeping of animals.

The Ohio Court, in *State (of Ohio) v. Cowan*, 103 Ohio St 3d 144, 814 NE 2d 846 (Ohio 2004),

[1]Notice of intent to file this brief was timely received by all parties under Rule 37.2 (a). Petitioner consented and Petitioner participated in the writing of this brief. Respondent withheld consent. No monetary contribution has been made but Petitioner paid the printer.

found unconstitutional a statute in which the only meaningful opportunity the individual had to be heard on the issue of whether an animal was indeed vicious or dangerous was at the individual's criminal trial.

The California penal code section in the present case is very similar, in that some individuals will receive a criminal trial after the seizure of one's animals, should the prosecutor choose to charge.

Whereas the California Court in the present case wrote that procedural due process was satisfied by a hearing merely on the reasonableness of the seizing officer's belief, with no hearing needed as to the actual conditions of the animals seized, the Ohio Court had a completely different interpretation of the process due the pet owner.

The Ohio Court found that the right to due process is "the right to be heard, by testimony or otherwise, and to have the right of controverting, by proof, every material fact which bears on the question of right in the matter involved. If any question of fact or liability be conclusively presumed against him, such is not due process of law."

b. Owning a Pet

Ownership is a concept which bespeaks responsibility as much as anything else.

The owner of an apartment building may benefit from the rents collected, but is responsible for providing safe premises for tenants and visitors

alike. Sometimes, the liability a landlord will incur as a result of ownership will outweigh the value of owning the property. Ownership is indeed all about responsibility.

To own a pet is to enjoy and love a pet, but also to commit to being responsible for a pet. It is a commitment which an individual makes to his or her animal.

Those who abuse animals should not have animals. But, those who provide well for their animals should not have their cherished companions taken needlessly.

The only way to fairly determine whether an individual should be deprived of his or her animal is to provide a full adjudicative hearing. The test of probable cause is not enough.

The situation of animals being the asset seized by the government means that more attention should be paid to the issue of due process, not less.

If a car is seized from someone, the individual may care but the car does not care. If an animal is seized from someone, both the individual cares and the animal cares.

That the animal cares has been legislated to be in the public interest. Federal law has codified the public interest in the wellbeing of animals. State laws nationwide have done the same.

The veterinary community speaks of separation anxiety syndrome in pets. Appendix A shows the full text of a reference article entitled "Separation Anxiety Syndrome in Dogs and Cats" published in the Journal of the American Veterinary Medical Association, in the June 1, 2003, issue.

The article speaks of separation between pets and their owners leading to pets suffering from anxiety, panic, and depression. The article speaks to separation anxiety in pets who have been separated specifically from their "preferred associate" or "favorite person".

We are not speaking merely of animals which may find themselves without a person. We are speaking of animals who find themselves without their "favorite person".

Appendix B shows the abstract of a study entitled "Attachment Behavior in Dogs (*Canis familiaris*): A New Application of Ainsworth's (1969) Strange Situation Test" published in the Journal of Comparative Psychology, in the September, 1998, issue.

This study found that a dog's relationship to humans is analogous to "child-parent" attachment behaviors and "mother-infant" interactions.

Appendix C shows the abstract of a study entitled "Experimental Evaluation of Attachment Behaviors in Owned Cats" published in the Journal

of Veterinary Behavior: Clinical Applications and Research, in the July-August, 2007, issue.

Similarly, this study found that cats manifest attachment behaviors toward their owners, with results consistent with studies of "children attached to their mothers".

Thus, not only is it unconstitutional to deprive an individual of his or her animals without due process, these studies show us that it is abusive to the animals to needlessly deprive them of their happy homes and their favorite people.

Pet owners are the perfect targets for false accusations. The abuse of an animal is so viscerally disgusting that any thought of it may cause people to cut short their more deliberative tendencies. But this is not only harmful to the individuals, it is harmful to the animals.

When the government has seized animals and cannot prove that the seizure was actually necessary, the government should immediately return these animals to their owners, without charge. The test of probable cause is not enough, neither for the owners nor for their animals.

Respectfully submitted,
Maureen Hauch, Executive Director,
Dawn Capp, Esquire, Board Member,
American Dog Owners Association

JAVMA, Vol 222, No. 11, June 1, 2003 Vet Med Today: Reference Point

Reference Point

Separation anxiety syndrome in dogs and cats

Stefanie Schwartz, DVM, MSc, DACVB

Distress associated with separation from a preferred companion or group has been identified among individuals from a variety of disparate species, including birds,1,2 dogs,3,4 cats,5,6 horses,7-12 pigs,13 sheep,14 goats,14,15 cattle,16,17 cetaceans,18,19 and primates (including humans).20-23 In human medicine, the term **separation anxiety disorder (SAD)** is used to refer to excessive and recurrent distress associated with separation from home or major attachment figures.23 It is seen primarily in children and adolescents,23,24 but is increasingly identified in adults of all ages.24,25 Similarly, dogs may experience a negative emotional reaction when their preferred associate (favorite person or pet companion) is absent.3,4 Dogs that are sent to board at kennels, hospitalized at veterinary clinics, abandoned by the roadside, surrendered to shelters, or left alone at home and dogs that survive the illness or death of a pack member may suffer various degrees of anxiety.3,26 In dogs, the degree of distress is likely dependent, in part, on the degree of attachment to the absent figure.27 Domestic cats have traditionally been viewed as asocial or even antisocial. However, a growing body of evidence

suggests that cats do form social bonds28-32 and may develop separation reactions similar to those in dogs.5 In people, SAD is clearly distinct from panic attacks and other severe emotional reactions.23 In contrast, separation reactions in dogs and cats are often characterized by extreme emotional and behavioral reactions, and the degree of anxiety displayed by some dogs is consistent with the diagnostic criteria for panic attacks and other more serious psychiatric disorders in people, some of which are accompanied by intense physiologic and cognitive symptoms of fear and discomfort.23 For example, in a person, self-mutilation would be considered a serious symptom and would prompt revision of a diagnosis of SAD to a diagnosis of an obsessive-compulsive disorder or another serious diagnostic consideration. In pets, on the other hand, separation reactions may be characterized by psychogenic grooming that results in serious self-inflicted injury. It seems, therefore, that separation reactions in dogs and cats have much in common with phobic disorders and panic attacks in people. Anxiety can escalate to panic, and coping mechanisms may fail when the apparent jeopardy of a context is inflated, as affected animals overreact to ambiguous or unpredictable situations. In 1 study,33 the ambiguity of a situation was shown to exacerbate anxiety in children with separation issues, and this may be relevant to dogs and cats that exhibit dysfunctional separation behavior. In addition, there may be a clinical association between SAD in people and the development of anxiety disorders,24 and there is some evidence that suggests that this may be true in dogs as well.34 Some elements of separation reactions in dogs and cats may share similarities with aspects of bipolar affective disorders in

people.23 People with bipolar affective disorders experience cycles of manic-depressive illness that may last for days or months, during which their mood shifts dramatically between agitation and lethargy. Similarly, during a separation period, a dog or cat with a severe separation reaction may oscillate between relative manic (agitated) states (eg, episodes of vocalization and destructiveness) and depressive (subdued) states. Clearly, the signs of separation anxiety in dogs and cats are unique and frequently more insidious, compared with the relatively milder psychiatric symptoms that define SAD in people. Therefore, a diagnostic label of separation anxiety in dogs and cats is inadequate, because it does not encompass the range and intensity of behaviors exhibited by emotionally reactive pets. Given the complexity and diversity of the clinical and subclinical signs related to separation reactions in veterinary patients, the term of **separation anxiety syndrome (SAS)** has been introduced.5 Separation anxiety syndrome in dogs and cats represents a group of emotional, behavioral, and physiologic responses that vary in intensity and clinical appearance. This redefinition highlights new insights into the condition, and the present review attempts to examine more closely how sociality and domestication in dogs and cats may be a precursor to the development of the dysfunctional social ties that characterize SAS. Parallels will be drawn between the overdependence of pets with SAS and opioid drug dependence. As pets live longer, the incidence of SAS in geriatric pets is predicted to rise, and this condition will have to be distinguished from other ailments. Finally, grief in pets is discussed for the first time as a unique form of SAS.

Sociality in Dogs and Cats

To the best of our knowledge, separation reactions are not a characteristic of asocial species, for without the proclivity toward formation of social bonds, separation- related anxiety would not exist.35 By definition, individuals that belong to social species are sensitive to the absence of an attachment figure.2,3,5,7-9,12-17,19,20-22 Individual experiences, inborn emotionality, degree of attachment, and species-specific sociality determine the specific signs and the intensity of those signs in animals with separation reactions. In essence, therefore, development of separationrelated distress can be viewed as a measure of sociality (ie, the tendency of individuals to associate or assemble in groups). Sociality is a plastic phenomenon that is, in part, neurologically programmed in dogs and cats. Puppies are most susceptible to social exposure when they are between 6 and 13 weeks old.36 A similar phenomenon is identified in kittens between 2 and 7 weeks old.32 By 8 weeks of age, puppies and kittens are increasingly defensive, and as the CNS matures, social interactions become more tentative.36 Puppies and kittens can thrive only when raised with nurturing social interaction. Puppies raised in total isolation, for example, develop abnormal responses to new environments and significant increases in the threshold to pain response.36 Kittens raised in isolation may become more aggressive. In fact, early separation from the queen can result in fear of, or aggressiveness toward, cats and people, learning disabilities, increased activity, and increased predatory behavior.6,36 Early human handling helps to produce more tame kittens and puppies that are more adaptive to change (stress) throughout their lifetimes. Just a few minutes a day is all that is necessary, although kittens or puppies < 2 weeks old

should not be overly handled.32,36 The social behavior of dogs reflects their descent from wolves, which have a highly structured social organization,37-39 and the domestication of dogs was likely facilitated by intrinsic social parallels with people. In both wolves and people, for instance, group cohesion and cooperation are essential to individual survival and species success. Among wolves and dogs, establishment of a dominance hierarchy defines the social structure of the pack. However, emotional attachments between pack members is the glue that cements and solidifies the social unit. A recent study40 suggests that during the process of domestication, dogs may have developed particular social-cognitive abilities that enable them to be more skillful at reading human communicative signals. These skills surpass those of the great apes and wolves and may be apparent in puppies that are only a few weeks old and have had limited human contact.40 Social behavior in domestic cats is quite complex. Hierarchies within a group of cats are formed with subtle and sometimes not so subtle displays of dominance and submission28,31,32 and with multifaceted social communication through facial expression,32 body posturing, 32 and vocal communication.32,41 Affiliative behavior, which facilitates proximity and intimate social interaction, is common among domestic cats.28 Preferential alliances (what humans might call friends) are consistently seen and reflected by a cat's choice of partners for sleeping; resting, sitting, and playing together; sharing food; allogrooming; and allorubbing. Members of a stable social group of cats have been shown to touch each other as much as half the time. Females may cooperate in rearing their young.28 Most pet cats engage in frequent social

interactions with conspecific housemates, as well as with their owners. In fact, 1 study29 showed that most cats slept with a family member, shared food with people, and greeted their owners at the door. Sociality toward people has been shown to be governed by learned and inherited mechanisms.30 Perhaps one of the major differences between cats and dogs is that dogs generally require ongoing social interaction. Although cats are sociable by nature, as adults they do not require human or feline contact to survive. In addition, there is much wider individual variation in sociality among cats than among dogs, in that some cats are indeed solitary and others more socially dependent. This social variability may be explained in part by the fact that cats have not been systematically domesticated, compared with dogs. Additional insight into the social differences between domestic cats and dogs stems from the observation that social systems may be flexible and frequently depend on environmental resources (eg, abundance of food) and predatory pressures.35 Domestic cats have apparently developed the social skills necessary to cope with fluctuations in population density. For instance, when food is abundant in a restricted but desirable space, cats will tolerate crowding, and aggression may be inhibited.28,29 Social pressures on outdoor cats are driven by the availability of food, the population density of other outdoor cats, and the presence of various dangers. Adjustable group size and sociality are recognized in a variety of other highly social species, including apes42 and cetaceans.43,44 This facultative sociality of domestic cats may help explain the greater range in social affinity among adult cats, compared with the more consistent and, perhaps, obligate sociality of domestic dogs, which have a greater dependence on

group cohesion. The inherent sociality of dogs and cats is fundamental to SAS and, ultimately, to the prevention and treatment of separation reactions.

Adaptive and Maladaptive Separation Reactions in Dogs and Cats

In puppies and kittens, some separation reactions are normal and desirable, as they are important to survival. Young puppies and kittens, for instance, normally emit distress calls when removed from the nest. In fact, a queen will not retrieve a straying kitten unless the lost kitten vocalizes.32 Newborn puppies and kittens first experience separation when the bitch or queen temporarily leaves the nest or when they are removed from the litter and held by human hands. Soon after, these puppies and kittens must shift their normal social attachments from littermates and the dam to their new human owners. Mild signs of SAS, therefore, may be normal in newly adopted young pets as they adjust to separation from their littermates and dam. When these separation reactions are retained beyond the puppy or kitten period, however, they may become maladaptive. In juvenile and adult dogs and cats with SAS, in particular, the distress expressed often seems excessive in context with the actual danger of the situation. The process of domestication appears to have resulted in retention of juvenile behaviors in adults, and the dependence of the young on parental figures is a characteristic of juvenile behavior. Kneading behavior in adult cats that is directed toward a preferred human companion is one example. Although there may be some variability in canine attachment behavior to humans, the canine-human bond is thought to most resemble the mother-infant interaction in people.45 This intimate and mutual bond is part of what makes pet ownership so

gratifying and emotionally satisfying. It may also be what predisposes dogs and cats to the dysfunctional separation reactions that characterize SAS. Both cats and dogs may retain juvenile characteristics of separation distress in the form of a predisposition toward neurotic overdependence on their human owners as part of a genetic byproduct of domestication. Overdependence may be reinforced unintentionally by pet owners. For example, pets may become unused to separation if they are not given the opportunity to learn to cope with time away from their caretakers. 46 Pet owners may be reluctant to leave young pets and, thereby, unintentionally encourage neurotic social attachment.

Behavioral Aspects of SAS

Sociality is fundamental to the behaviors associated with SAS. The clinical signs of SAS often reflect a pet's frustration with and anxiety caused by social separation and, specifically, separation from an important attachment figure. Separation-related behavior problems in dogs and cats vary widely in form and degree, even in the same individual. Clinical signs are seen primarily during an owner's absence, although anxious behaviors any time during the perideparture period may be attributed to SAS. For instance, anticipatory distress is common in the period preceding the owner's actual departure. 3,4 Dogs learn the habitual sequence of events leading to an impending departure, and anxiety often begins before the owner leaves. Persistent shadowing or following of the owners and extremely excited greeting of a returning owner are associated with SAS in dogs. Signs of SAS in dogs include agitation (eg, restlessness, pacing, and jumping); physiologic abnormalities (eg, vomiting, salivating, trembling,

hyperventilating, and tachycardia); elimination abnormalities (eg, urination and defecation, with or without diarrhea); vocalization (eg, whining, whimpering, barking, and howling); destruction (eg, escape attempts such as chewing, digging, scratching, and jumping through doors or windows); self-mutilation (eg, excessive grooming, hair pulling, and self-directed aggression); signs of depression (eg, social withdrawal, lethargy, inappetence, and submissive or fearful postures or facial expressions); and aggression (eg, mouthing, nipping, growling at, or biting the owner at departure). Signs are typically most intense within the first 15 minutes after the owner's departure, although they may persist much longer or occur intermittently during isolation. 3,4 They may be seen alone or in any combination and may progress in intensity or change in appearance over time. For example, agitation may be the only sign or may simply be the first or last in a sequence of other SAS-related signs, such as inappropriate elimination in the form of diarrhea or urination. Signs of depression (eg, inactivity and social withdrawal) may be the only indication of SAS in some dogs or may follow a period of agitated destructiveness and excessive vocalization in others. Signs of SAS must also be differentiated from similar signs in dogs and cats with other disorders.3,5,46 There are 3 primary categories of misbehavior in cats and dogs with SAS3,5,46: inappropriate elimination, vocalization, and destructiveness. Inappropriate elimination may be intentional (eg, territorial marking to release anxiety) or an involuntary physiologic effect of extreme distress (eg, stress-induced diarrhea or urination). In 1 study,5 house soiling was the most common problem in cats with SAS. In this study, inappropriate defecation was

more common in neutered female cats than in neutered male cats. Seventy-five percent of cats that urinated inappropriately in association with the absence of an attachment figure did so exclusively on the owner's bed. Excessive or persistent vocalization, typically attention-seeking distress calls, is reported in both dogs and cats with SAS. Destructiveness among dogs with suspected SAS may include desperate escape attempts made during confinement to a crate or restricted space. In such cases, this barrier anxiety may be similar to claustrophobia (which can occur independently of separation issues) and should be distinguished from separation-triggered misbehavior. In cats with SAS, destructiveness was observed in neutered males but not in neutered females.5 However, not all destructive behavior that occurs in a owner's absence is due to a separation reaction. Accidental destruction of property by an unsupervised playful and inquisitive pet must be included in the differential diagnosis of destructiveness.3,5,46 Other less common signs of SAS are also recognized. 3,46 Self-mutilation, such as psychogenic licking or compulsive tail chewing, for instance, may be associated with separation reactions in both dogs and cats. In addition, dogs may injure themselves during attempts to push, chew, and scratch their way out of a confining enclosure. Puncture and laceration wounds may result from protruding metal wires or sharp edges of damaged crates. In these cases, injury is not selfinflicted but rather a consequence of destruction. Psychogenic overgrooming appears to be more common in female cats with SAS than in males and may be underreported.5 Another less frequent, but not unknown, sign of SAS is aggressiveness.3 Anticipatory anxiety in some dogs may be so intense

that they begin to nip or bite, apparently to disrupt the owner's preparations to depart or prevent their approach to the door. Similar behavior associated with an owner's impending absence has not been identified in cats. Nonetheless, cats can learn to nip to gain attention; therefore, it would not be inconceivable that cats, like dogs, with SAS would act aggressively toward their owners as they exit the home. The frequently progressive and often intense signs of separation distress displayed by some dogs and cats may have much in common with drug dependence and acute withdrawal from opioids. Beyond the genetic and learned components of SAS, there may be an underlying biochemical mechanism that may have parallels to opioid drug dependence. This is supported by the finding that some signs of SAS may be alleviated with opiates. Low doses of oxymorphone and morphine were shown to profoundly reduce crying in briefly isolated puppies,47 and physiologic measures of separation distress increased slightly in cattle treated with the opiate antagonist naloxone.17 Thus, it is possible that opiate agonists might be effective in the treatment of SAS in dogs and other species.

Predisposing Factors for SAS

Common risk factors associated with SAS in dogs include a history of traumatic separation, inexperience with being left alone, excessive greetings and prolonged departures by owners, changes in the owner's routine (dogs susceptible to SAS may develop clinical signs in response to even slight changes in routine), relocation to a new home, addition of a new pet sitter, and a death in the family (conspecific or other family member). In addition, dogs that shadow or follow their owners or that are neutered, purebred, or have a single owner are more

likely to develop SAS.3,46,48,49 One study50 suggested that purebred dogs may respond better to treatment than dogs of mixed breeding, although this deserves further investigation. Risk factors for SAS in cats5,51 appear to be consistent with risk factors in dogs and include having an owner who works long hours, a change (new schedule or extension) in the owner's work schedule, frequent business or vacation travel by the owner, an increase in the time the owner spends with family or friends, development of a new romantic involvement for the owner, departure of a family member (eg, through divorce or death), and death or abrupt removal of another pet. In addition, cats with a history of shelter adoption after 3 months of age, cats that follow their owners around the house, neutered cats, and cats owned by a single individual are more likely to develop SAS. Additional investigation into SAS in cats is warranted.

Unique Manifestations of SAS in Dogs and Cats

SAS in geriatric patients—Older pets, like older people, may be less adaptive to change and stress in general. In particular, normal senile changes may reduce the ability of aging pets to cope with separation from attachment figures and removal from or changes in familiar surroundings. As pets live longer than ever before, SAS may become more common in geriatric patients. Underlying medical problems can reduce an aging pet's emotional adaptability and cognitive capacity; therefore, underlying medical conditions should be considered in older pets with behavioral disturbances, including SAS.52,53 In my experience, for example, a sudden onset of SAS in middle-aged dogs may be associated with hypothyroid disease. Metabolic diseases and other physical ailments (eg, deafness, blindness, and

arthritis) must be considered when aging pets show behavioral changes. One study52 reported that concurrent age-related physical ailments, including, but not limited to, degenerative joint disease and renal disease, were likely to exacerbate behavior problems. However, the same study also determined that behavior problems, including SAS, frequently occur in older pets in the absence of any health issues. Nevertheless, SAS can emerge in older dogs without any previous history of separation reactions. Old dogs with behavior problems, including SAS, often benefit from behavioral therapy.52 In cats, SAS may be more common among aging females than males, possibly because of sex-based differences in feline social behavior.5 A thorough physical evaluation, including laboratory analysis of blood and urine, remains an important part of the workup of cats and dogs with signs of SAS, regardless of age. Cognitive dysfunction must be ruled out in older dogs and cats suspected of having SAS because of the overlapping clinical features of these disorders. Hypervocalization,nonresponsiveness, disorientation, and changes in the sleep-wake cycle and feeding patterns may be suggestive of cognitive dysfunction syndrome in dogs and must be distinguished from signs associated with SAS.54-57 A clinical entity resembling cognitive dysfunction syndrome has been identified in geriatric cats,58 and amyloid plaques similar to the senile neural plaques that characterize Alzheimer's disease in humans and cognitive dysfunction syndrome in dogs have been identified in cats with signs of cognitive dysfunction.56 In cats and dogs, cognitive dysfunction syndrome has been distinguished from SAS and other clinical considerations and may respond temporarily to treatment with selegiline.

Grief as a form of SAS in dogs and cats—Grief can be viewed as the most extreme separation reaction among social animals. Public mourning and private expressions of grief are considered normal human responses following the death of a family member or friend,23 and feelings of sadness, insomnia, weight loss, and decreased appetite are recognized symptoms of loss in people. The stages of grief in humans have been defined59 and reflect the cognitive and emotional process of coping with death. Unlike people, it is unclear whether animals are able to cognitively process the concept of death. Regardless, it is not strictly important whether dogs and cats cognitively understand that a preferred companion has died or been permanently or temporarily removed. They may develop signs of emotional distress simply as a result of the absence of this individual. Separation anxiety syndrome is a reaction to separation itself. Thus, dogs and cats may indeed exhibit behaviors that reflect the emotional impact of the death of a close companion. Separation reactions in dogs and cats may be exacerbated by the moods of their human caretakers who may be mourning the death of the same person or pet. Signs of lethargy or agitation, social withdrawal or uncharacteristic overdependence, anorexia, and other changes may develop. In addition, stress can trigger latent or subclinical disease. Signs of profound or persistent depression and anxiety may justify referral to a board-certified veterinary behaviorist and the use of psychoactive medications, but most dogs and cats adjust to the death of an attachment figure within several weeks.

Treatment of SAS

Treatment of SAS in dogs and cats should focus on managing clinical signs in the individual patient and

should consider the pet's needs for social interaction, intellectual stimulation, and exercise.3,5,46 Pets whose emotional, psychological, and physical needs are met regularly and reliably will be less prone to develop the dysfunctional overdependence and anxious misbehavior that characterize SAS. Increased attention in the form of interactive play, petting, and grooming should be scheduled such that the caretaker's planned absence coincides with the pet's desire to rest. In newly introduced dogs, the progression of initial mild signs of SAS (due to separation from littermates, dam, or previous owners) or sensitization to SAS that may emerge later in life may be reduced by providing bedding near the new owners overnight (social animals naturally remain together for safety while sleeping). Events that occur during the perideparture period (ie, the period just before, during, and after the departure of the preferred associate) can reinforce a pet's tendency toward SAS and, therefore, should be as calm as possible. For example, greeting rituals are normal social behaviors in both dogs and people. The exuberance of some human greetings, however, may create conflict and reinforce undesirably chaotic greetings by the dog. Overly enthusiastic greetings (eg, whining, jumping, or pacing) laden with redirected (eg, scratching) or displaced (eg, running to get a toy) activities are typical of dogs with SAS.3,48 In addition, long departure rituals characterized by a melodramatic or anxious attitude on the part of the owner may cause dogs and cats to view the owner's departure as an anxiety-provoking event, exacerbating the degree of anxiety during separation. In dogs, departures should be preceded with a long leash walk appropriate to the individual's age and level of activity and to prevailing weather

conditions. Presentation of an attractive chew toy, such as a rawhide bone or hollow toy filled with treats, promotes a positive association with departure and provides an appropriate oral outlet for anxiety. Disruption of a predictable departure sequence and progressive desensitization to the owner's habitual departure routine are also helpful.46,50 Some dogs with SAS may also have other anxiety-related issues, such as thunderstorm phobia.34 Thus, potential causes of anxiety must be thoroughly explored, and the treatment plan must address all important causes. Confined house cats have a restricted territory and, consequently, reduced options for physical and intellectual stimulation. Cat owners should compensate by providing additional distractions, such as interactive play with attractive toys, and many of the same activities suggested for dogs. Targets of SAS-associated elimination should be made inaccessible or unattractive. The treatment of house soiling in cats is described in detail elsewhere.60-63 The addition of another pet to keep a pet with SAS company is not necessarily a solution to the problem. It is thought that the pet's emotional response is caused by the absence of a particular individual and not social isolation as such. Tuber et al64 measured the behavioral and glucocorticoid responses of adult domestic dogs in a shelter situation following removal of a kennel mate and placement in a novel environment for 4 hours. Measures of stress were unaffected by the kennel mate's presence or absence; however, stress was reduced by the presence of a human caretaker. This study suggests that human companionship may be more important to dogs and may point to a difference in the social relationship of dogs toward people.40 However, these results should

be interpreted cautiously, because glucocorticoid responses to separation may be more reflective of degree of attachment. The absence of an effect following separation from an affiliative conspecific may be attributable to differences in separation from partners that are merely affiliative, compared with separation from partners to which one is emotionally attached.27 Anecdotal evidence suggests that in some cases, the addition of a companion animal may improve an anxious dog's ability to cope with separation from its owner. However, addition of a new pet may make the situation worse if it draws the owner's time and attention away from the already anxious resident pet. New housemates must be gradually introduced, despite the temptation to accelerate the process, particularly when the new pet is intended to ease anxiety in a resident pet. For both cats and dogs, conflicts between new housemates are not unusual. Although such conflicts typically resolve, some pets are incompatible. Thus, the benefits and risks should be carefully considered before adding a new pet to a household with a dog or cat with SAS. The use of psychoactive medication may be necessary for treatment of SAS in dogs and cats if behavior modification alone is unsuccessful. In dogs in particular, psychoactive medication may be needed to control signs of SAS. Dog owners may be less likely to comply with techniques that require more time and effort, such as desensitizing affected dogs to departure cues, and may be more likely to follow simple behavior modifying techniques, such as providing a chew toy at departure.50 In dogs and cats with acute or extreme SAS, such as a reaction to the death of an attachment figure or substantial destruction of property, use of a medication with predictable effects and a rapid onset is important.

Alprazolam and other benzodiazepines are rapidly absorbed.65 In cats, triazolam is an attractive alternative to diazepam, which has previously been associated with adverse effects, although no problems have been recently reported.66 Tricyclic antidepressants may require several weeks to take effect65 and may be more appropriate for long-term management. Clomipramine has been successful for the treatment of SAS in dogs.67-69 However, in 1 study,69 administration of clomipramine without concomitant behavioral treatment was unsuccessful in controlling separation-related behavior problems, whereas behavior modification alone was successful in reducing the severity of clinical signs. Psychoactive medication may be an important complement to behavioral treatment, but is unlikely to replace the need for modification of the pet's lifestyle, which is fundamental to the problem. A CBC, serum biochemical profile, urinalysis, and thyroid function tests are recommended prior to administration of psychoactive drugs, both to identify underlying problems and to provide baseline values in the case of long-term drug administration. Laboratory tests should be repeated periodically during prolonged drug treatment to detect adverse effects.

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Attachment Behavior in Dogs (*Canis familiaris*): A New Application of Ainsworth's (1969) Strange Situation Test

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Abstract

Fifty-one owner–dog pairs were observed in a modified version of M.D.S. Ainsworth's (1969) Strange Situation Test. The results demonstrate that adult dogs (*Canis familiaris*) show patterns of attachment behavior toward the owner. Although there was considerable variability in dogs' attachment behavior to humans, the authors did not find any effect of gender, age, living conditions, or breed on most of the behavioral variables. The human–dog relationship was described by means of a factor analysis in a 3-dimensional factor space:

Anxiety, Acceptance, and *Attachment.* A cluster analysis revealed 5 substantially different classes of dogs, and dogs could be categorized along the secure–insecure attached dimensions of Ainsworth's original test. A dog's relationship to humans is analogous to child–parent and chimpanzee–human attachment behavior because the observed behavioral phenomena and the classification are similar to those described in mother–infant interactions.